

A Fast Constructive Algorithm For Fixed Channel Assignment Problem

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Summary

With limited frequency spectrum and an increasing demand for mobile communication services, the problem of channel assignment becomes increasingly important. It has been shown that this problem is equivalent to the graph-coloring problem, which is an NP-hard problem. In this work, a fast constructive algorithm is introduced to solve the problem. The objective of the algorithm is to obtain a conflict free channel assignment to cells which satisfies traffic demand requirements. The algorithm was tested on several benchmark problems, and conflict free results were obtained within one second. Moreover, the quality of solution obtained was always same or better than the other reported techniques

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